

CLAIMS

5 1. A method of activating a display element of a display device
having $n \times m$ array of display elements, each display element coupled to a
logic controlled switch, the method comprising:

applying a row address input and a row electrode input to
control logic of the logic controlled switch of the display element;

10 applying a column address input and a column electrode input
to the control logic of the logic controlled switch of the display element;

activating the display element with the logic controlled switch
when the row address and row electrode inputs and when the column
address and column electrode inputs satisfy a condition.

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2. The method of Claim 1,

comparing the row address input and the row electrode input,

comparing the column address input and the column electrode
input,

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activating the display pixel with the logic controlled switch
based on results of the comparisons.

3. The method of Claim 2, controlling the logic-controlled switch includes enabling and disabling the logic controlled switch with a charging capacitor.

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4. The method of Claim 1,
activating at least some display elements of the display device
at a first refresh rate,

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activating other display elements of the display device at a
second refresh rate, different than the first refresh rate.

5. A method in a display device comprising an $n \times m$ array of
addressable display elements, the method comprising:

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activating at least some display elements at a first rate;
activating other display elements at a second rate,
the second refresh rate less than the first refresh rate.

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6. The method of Claim 5,
activating the display elements with a corresponding logic
controlled display element switch when row address and row electrode
inputs and when the column address and column electrode inputs satisfy a
condition.

7. The method of Claim 6,
comparing the row address input and the row electrode input,
comparing the column address input and the column electrode
5 input,
activating the display element with the logic controlled display
element switch using the results of the comparisons.

10 8. The method of Claim 7, enabling and disabling the logic
controlled display element switch with a switch enabling charging capacitor
gate controlled by the results of the comparisons.

15 9. The method of Claim 5, activating other display elements at
the second rate includes not activating the other display elements.

20 10. A display device comprising:
a plurality of display elements arranged in a matrix,
each display element including a display pixel coupled to a
switch,
each display element including an addressable latch having an
output coupled to a controlling input of the switch,

the addressable latch having a row address input and a column address input.

5 11. The device of Claim 10, the addressable latch having a row electrode input and a column electrode input.

10 12. The device of Claim 10,
the addressable latch of each display element including row address logic and column address logic having corresponding outputs coupled to the output of the addressable latch,
the row address input coupled to the row address logic, the column address input coupled to the column address logic.

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13. The device of Claim 10,
the addressable latch of each display element including first and second comparators, the first comparator having the row address input and a row electrode input, the second comparator having the column address input and a column electrode input,
20 each display element including a logic device having a first input coupled to an output of the corresponding first comparator, the logic

device having a second input coupled to an output of the corresponding second comparator.

5 14. The device of Claim 13, the logic device is an AND gate, the output of the addressable latch is an output the logic device

10 15. The device of Claim 13, a pixel capacitor connected parallel with the display pixel, and a switch enabling capacitor coupled to an input of the switch.

15 16. The device of Claim 10 is a thin-film-transistor display device.

20 17. A method in a display device comprising an $n \times m$ array of addressable display elements, the method comprising:
selectively activating display elements by individually addressing the display elements to be activated;
reducing power consumption by addressing at least some of the display elements at a first frequency and addressing other display elements at a second frequency,

the second frequency less than the first frequency.

18. The method of Claim 17,
5 selectively activating the display elements includes,
applying a row address input and a row electrode input to
control logic of the corresponding display element;
applying a column address input and a column electrode input
to the control logic of the corresponding display element;
10 activating the display element with a logic controlled switch
when the control inputs satisfy a condition.

19. The method of Claim 18,
15 comparing the row address input and the row electrode input
with the control logic,
comparing the column address input and the column electrode
input with the control logic,
activating the display element by enabling the logic controlled
20 switch using the results of the comparisons.

20. The method of Claim 19, enabling and disabling the logic controlled switch with a switch enabling capacitor controlled by the control logic.